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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,720	01/20/2004	Oleg M. Efimov	PD-03W060	3693
7590	07/27/2005		EXAMINER	
John E. Gunther Raytheon Company P.O. Box 902 (E1/E150) El Segundo, CA 90245-0902			MACK, RICKY LEVERN	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,720

Applicant(s)

EFIMOV ET AL.

Examiner

Ricky L. Mack

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0505
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species represented by claims 21-28 in the reply filed on 5/13/05 is acknowledged.
2. Claims 1-20 and 29 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/13/05.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

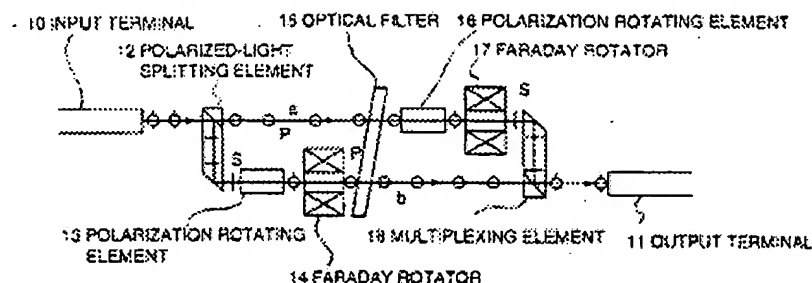
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyama et al. (6081367 A).

Yokoyama discloses, as in claim 21, an optical arrangement (see fig. 1 below) comprising: a first beam splitter (12) for transmitting light of a first polarization (P), to provide a first beam, and reflect light of a second polarization (S); a first polarization rotator (17) in optical alignment with said first beam splitter; a second polarization rotator (14) in optical alignment with said first beam splitter; a second beam splitter in optical alignment with said first and said second polarization rotators; and a spectral filter (15) in optical alignment with said second beam splitter.

FIG. 1



Yokoyama discloses, as in claim 23, wherein said polarization rotators are Faraday rotators (14, 17).

Yokoyama discloses, as in claim 24, further including polarization adjusters (13, 16) in optical alignment with said rotators.

Yokoyama discloses, as in claim 25, further including a first fold mirror (see reflective portion at bottom of 12) disposed between said first beam splitter and said second polarization rotator.

Yokoyama discloses, as in claim 26, further including a second fold mirror (see reflective portion at top of 18) disposed between said first rotator and said second beam splitter.

Yokoyama discloses, as in claim 27, further including a first polarization adjuster (13) disposed between said first Faraday rotator and said second beam splitter.

Yokoyama discloses, as in claim 28, further including a second polarization adjuster (16) disposed between said second Faraday rotator and said second beam splitter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

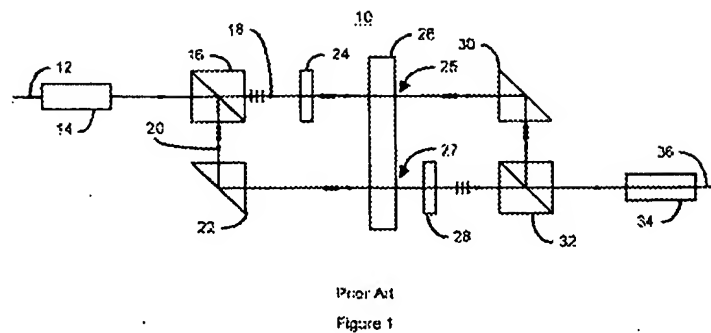
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 21, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (6522467 B1).

Li discloses, as in claim 21, an optical arrangement (see fig. 1 below) comprising: a first beam splitter (16) for transmitting light of a first polarization (18), to provide a first beam, and reflect light of a second polarization (20); a first polarization rotator (24) in optical alignment with said first beam splitter; a second polarization rotator (28) in optical alignment with said first beam splitter; a second beam splitter in optical alignment with said first and said second polarization rotators; and a spectral filter (26) in optical alignment with said second beam splitter.

Li discloses, as in claim 25, further including a first fold mirror (22) disposed between said first beam splitter and said second polarization rotator.

Li discloses, as in claim 26, further including a second fold mirror (30) disposed between said first rotator and said second beam splitter.



Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al. (6081367 A) in view of Mizrahi (6185023 B1).

Yokoyama discloses the claimed invention except for the rotators being a Bragg grating, as in claim 22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Bragg Grating for the purpose multiplexing and de-multiplexing an optical signal.


Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patel (5111321), Rumbaugh (5710655) and Eder et al. (2004024227 A1) are cited for disclosing optical filter wherein light is split and recombined.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricky L. Mack whose telephone number is (571) 272-2333. The examiner can normally be reached on Monday-Friday (6:30 AM to 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ricky L Mack
Primary Examiner
Art Unit 2873

RM
July 25, 2005